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ABSTRACT

The second in a four-phase research project, this report presents data from a stratified random sample of California middle schools using four grade span configurations (K-8, 6-8, 7-8, and 7-9). This phase, a pilot study, is designing a methodology to help researchers discriminate among the number, percentage, and types of programs offered by the various organizational patterns. The research is intended to assist policymakers confronted with implementation decisions regarding middle level programs. Report data were developed through telephone interviews; 37 schools participated, for a response rate of 92.5 percent. The middle school program components studied included personnel, curricular practices and offerings, clubs and activities, athletics, and facilities. Results showed that the needs of children "caught in the middle" ("transescents") must be considered in relation to studies and activity programs, the services offered, and certain intangible or "hidden" program elements (social interactions, teachers's implied actions, and physical environment effects). Numerous grade organization patterns have proved successful. What works in one location may not succeed in another. Only the school community can decide the "best" grouping. Future research should focus on program effectiveness relative to "transescents'" needs and to goals established by the individual school. Policymakers should explore various alternative programs and practice modifications, regardless of the grade spans adopted. (Eight references) (MLH)

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MIDDLE LEVEL EDUCATION IN CALIFORNIA

A Survey of Programs and Organization

David Hough, Ed.S.
Research Fellow

February, 1989

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Riverside, California

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EXECUTIVE SUMMARY

Introduction

Middle Level Education in California is the second in a four-phased research project initiated and funded by the Murrieta School District in cooperation with the University of California, Riverside, and the California Educational Research Cooperative (CERC).

The purpose of this report is to present data collected from a stratified random sample of middle level schools relative to four grade span configurations, i.e., K-8, 6-8, 7-8, and 7-9 from throughout the state of California. This phase of the research design is a pilot study intended to lay the groundwork for future methodology that will enable researchers to discriminate among the number, percentage, and types of programs offered by the various organizational patterns. The intent is to offer basic descriptive information for policy makers who are confronted with decisions regarding the implementation of middle level programs and their accompanying grade organization considerations.

The decision regarding what programs to offer and in which organizational pattern those programs can best be implemented is still subject for debate. Future research should center around the effectiveness of programs at various grade levels in order to determine optimal operational strategies to meet the specific needs of children in the middle grades.

Limitations

Given the diversity of grade spans throughout the state of California, determining where some schools "fit" into the scheme of middle level categories does not produce a perfect picture. For instance, the 44 identified K-7 schools not included in this study need to be examined, as well as other schools with less traditional grade configurations.

Initially, we included a sample of ten California schools engaged in the "partnership" program; however, the surveys found that programs were either in the "planning" stage, partially operational, or not yet clearly defined. Therefore, this part of the study was "tabled" until such time as the new programs become firmly established.

Another initial concept, analyzing California Assessment Program scores and applying factor analysis techniques to distinguish the independent variables, proved futile. The inability to control for the many external variables destroys internal validity and makes any attempt at deciphering cause and effect relationships not only insignificant but, in fact, harmful. To date, no study has provided a design to establish achievement-to-grade organization relationships and control extraneous variables. Moreover, until a clearer picture of the critical elements needed for successful middle level school programs emerges, any attempt to equate program elements to test scores will obscure more than it will illuminate.

Recommendations and Conclusions

The data presented in this report were developed through telephone interviews with a small, stratified random sample of California schools

organized as elementary (K-8), middle (6-8), middle high (7-8), and junior high (7-9) schools. As is common with random samples, the need for replication is paramount. From an examination of the literature and from this study, however, policy makers can helpfully examine the issue of middle level education programs and organizational patterns. The following key points summarize the findings of this study.

First, the needs of children "caught in the middle," i.e., transescents must be considered. Four areas can be analyzed: (1) the program of studies, (2) the program of activities, (3) the services offered, (4) the intangible or "hidden" components.

The program of studies is addressed in three of the six domains outlined in this report -- school personnel, curricular practices, and curriculum offerings. The program of activities is addressed in the other three domains--clubs/activities, athletics, facilities.

Services were not addressed directly in this study; however, a degree of overlap among services and programs is inherent. One might consider, for example, the need to provide adequate space for exploration in academic classes as well as outside the classroom, enabling more individualized learning to take place. The domains studied, here, provide a framework to examine such issues, subsequently.

The intangible "hidden" program (often called the "hidden curriculum") is not addressed in this study; nonetheless, it is of great importance. What do children learn from their interactions with one another? What age children ought to be grouped together to provide the best school climate?

What do children learn from implied actions of teachers? from the lunchroom? rest rooms? playgrounds?

Programmatic concerns should be weighed relative to the developmental needs of transescents who exhibit a wide range of social, intellectual, physiological, and psychological levels of maturation.

Second, policy makers need to consider which organizational patterns -- which grade span configurations -- best facilitate implementing these middle level education programs. Here is where the paradox of the argument unfolds.

Any number of grade organization patterns have proven successful. To say one configuration is "better" than another is more a reflection of community values than of evaluations drawn from empirical data. In fact, data indicate a significant diversity among grade spans accompanied by significant similarities among programs. To say a K-8 is "better" than a 6-8 or vice versa misses the point. Only the school community -- the administration, teachers, staff, parents, students, community leaders -- can decide. What is best in one location may not be best in another.

Finally, this report shows relationships among and between programs and middle level grade spans. It does not purport to suggest that a given **program** is somehow "better" than another. Future research should focus on the effectiveness of programs relative to the needs of transescents and to the goals established by the individual school.

LITERATURE BRIEF

The comprehensive literature review titled *Vertical Articulation for the Middle Grades* (Hough, 1989) is the antecedent to this report. Included in that work is a historical account of the development of middle level education throughout the 20th century, graphs depicting the growth and organizational patterns of middle level schools, a discussion of developmental needs of middle years, "transescent" youth, and recent major research impacting the middle school movement. Following, here, is a summary of these critical issues for consideration by local school policy makers. These salient points should be evaluated as policies are developed and adopted to address the most appropriate and effective organizations and programs for middle grade children.

Lexicon

Central to the understanding of middle level education is a familiarity with the terminology. Although *Vertical Articulation for the Middle Grades* includes a "Glossary" (pp. 36-38), a more comprehensive glossary is found in *A Consumer's Guide to Middle Level Education* (Arth, et al., 1985). The nomenclature for specific organization types is important, not because it identifies program elements or school effectiveness, but because it controls overall conceptualization of the middle school issue. Junior high school, for example, is often used in association with a **program** of studies; middle school is used as a **philosophy** which more directly addresses transescent

needs; and middle level education denotes the **movement** to restructure/redefine the mission of schools in the middle.

The Junior High School

In response to the recommendations of several influential national committees at the turn of the 20th century, the so-called "reorganization" movement began. As a result, junior high schools were developed circa 1910, replacing the traditional 8-4 grade span organization with a 6-3-3 or 6-2-4 pattern. A host of goals were developed for this new junior high school, but the most enduring are, "The Six Functions of the Junior High School" coined in 1947 by William Gruhn and Harl Douglass. These oft'-cited functions are:

(1) Integration

(2) Exploration

(3) Guidance

(4) Differentiation

(5) Socialization

(6) Articulation (Gruhn & Douglass 1956:31-32)

Researchers have concluded that increases in the number of junior high schools from 1910 through 1960 were a response to overcrowding, especially caused by a post-World War I population boom, rather than an attempt to institute innovative programs. Still, the **goals** (if not the **programs**) of the junior high school continued to address the need for a unique school for a unique age group.

Prior to 1930 researchers studying the differences between K-8 and

junior high school programs tended to conclude that children benefited most from the former pattern. Later studies tended to find the latter were at least equal and in some ways even more beneficial. Current data reveal no significant differences solely attributable to grade organization.

The Middle School

By the early 1960's educators increasingly questioned the degree to which junior high schools were meeting their goals. It is fair to say that a consensus emerged (whether or not accurately cast) that:

--most educational programs did not significantly change, and those that did simply "imitated" the high school programs.

--teachers were not trained specifically for junior high age children; in fact, many viewed junior high teaching as a "training ground" or holding place until a high school position could be obtained.

--new facilities, supplies, equipment, et cetera were earmarked for elementary and high schools, and the junior highs "got what was left."

--pre-adolescents could not be understood; they were simply experiencing a "difficult stage" that had to run its course.

In short, junior high schools "failed" to live-up to their "promises."

Early advocates for a new school for middle level children believed that programs should be specifically designed to meet the needs of transescents. Such innovations as flexible scheduling, core curricula, guidance programs, less departmentalization, teams of teachers, individualized instruction, et al.

were fostered.

Again, researchers found a striking resemblance between the increased number of middle schools that were constructed to house post-World War II baby boomers and the junior high school's reaction to post-World War I population increases. In some instances schools simply changed their names from "junior" to "middle" without instituting middle school programs.

The middle school movement promoted an organizational structure that included grade 6 and not grade 9. Some schools reorganized to house grades 5,6,7, and 8 and a few included grade 4. The common conception became that a configuration of 7,8 or 7,8,9 was a traditional junior high school and that a middle school was most commonly a 6,7,8 configuration.

Comparisons

Braddock, Wu, and McPartland (1988) used statistical information from the 1985-86 National Assessment of Educational Progress (NAEP) to investigate national similarities and differences among middle grade organizations. Using data from 21,677 schools with grade spans of K-8, 6-8, 7-9, and 7-12, the following are reported:

(1) The typical 7th grade student attending a grade 6-8 middle school is located in a suburban community.

(2) The typical 7th grade student attending a traditional grade 7-9 junior high school is located within a city area.

(3) The typical 7th grade student attending K-8 or 7-12 schools is primarily located in a rural, nonmetropolitan

community.

(4) Typical 7th graders attending K-8 or 7-12 schools are located in the northeast region of the U.S., while 7th graders attending 6-8 middle schools show a concentration in the western region.

(5) The typical 7th grader attending a school with a traditional 7-9 junior high grade-span is exposed to a larger number of students and teachers than 7th grade counterparts in schools with other grade-span configurations. The average seventh grader in a 7-9 junior high school has about 905 schoolmates compared to 529 for the average 7th grader in K-8 grammar schools; 661 in 6-8 middle schools, and 607 in 7-12 high schools.

(6) The typical 7th grader in K-8 and 7-9 schools is in a setting with higher concentrations of low-income schoolmates than is a 7th grade counterpart in schools with other grade-span configurations.

(7) The typical 7th grader in 7-9 junior high schools is in a setting with higher concentrations of Black and Hispanic schoolmates, while 7th graders in 7-12 schools have higher concentrations of white schoolmates.

(Braddock, Wu, and McPartland 1988:9)

Several researchers have attempted to discover a "best" grade organization, primarily by comparing junior high schools with a 7-8 or 7-9

configuration to middle schools with a 4, 5, or 6 through 8th grade configuration. Most of the issues studied can be grouped into four developmental categories: social, intellectual, psychological, and physiological.

Significant contributions to the study of these domains in transescents have been made by those outside the field of education. Research from the last half of the present century indicates that children are maturing faster, both physically and socially. Recent brain lateralization research as well as brain growth research suggest that transescents may benefit by a reduction in the number of skill and reinforcement activities in their school programs accompanied with enrichment of social interaction and the synthesizing of new information.

Although a few studies purport to find significant differences in terms of student achievement and socialization between junior high schools and middle schools, these designs are problematic and inconclusive when replicated. Studies tend to find more similarities than differences. Most researchers today agree that grade organization is not the issue; the issue is whether or not school program designs meet the unique needs of transescents. Evaluating the effectiveness of these programs, especially over the long run, appears to be the next wave of middle level research.

Before innovative programs can be evaluated, however, a significant number of schools need to adopt policies facilitating program implementation. In this regard, the National Middle School Association (NMSA) assumes a major role. NMSA has expressed a commitment to aid schools by supporting research and providing information which will be of use to policy makers.

In addition, the Middle Level Education Council of the National Association of Secondary School Principals (NASSP) publishes middle level research, and the National Association of Elementary School Principals (NAESP) likewise addresses elementary and middle level school issues.

Currently, attempts are being made to identify specific programs and practices employed by "exemplary" middle schools. These studies (see George & Oldaker, 1985, for example) describe what takes place in "effective" schools. The thrust of this work is captured in the NASSP booklet, *Standards for Quality Elementary Schools: Kindergarten Through Eighth Grade* (1984) which outlines 21 "standards of excellence" for assessing "every quality school."

The California Middle School Movement

Several states have supported middle level education innovations during the past decade. Most recently, California has sponsored the "Middle Grades Partnership" -- a program initiated by State Superintendent Bill Honig, and others, in an effort to improve instruction for middle grades students. 109 middle grade schools throughout California designated as "Partnership Schools" are implementing programs outlined in the Middle Grades Task Force report *Caught in the Middle* (California State Department of Education, 1987) -- a state-sponsored compilation of middle level issues. The "partnership" effort has established regional networks involving local school districts, the State Department of Education, and colleges and universities who serve as resource centers for the 109 partnership schools.

Because of the current interest in middle level educational practices and because the California State Department of Education is backing the middle school movement and lending technical assistance to interested schools, much attention is now being directed toward "exemplary" middle schools.

It is this heightened interest that has caused many school districts to initiate new programs and practices, adopt special policies, and implement curriculum changes that better address the needs of transescents. In addition, educators continue to search for answers to the following questions: Which middle grade-span configuration(s) best facilitate the implementation of programs designed to meet transescent needs? Which organizational pattern(s) best facilitates learning? socialization? developmental needs? psychological well being?

THE STUDY: DESIGN AND IMPLICATIONS

Overview

As mentioned previously, the so-called "effective schools" research has proved the most proper model for identification of "successful" educational programs. This research strategy identifies schools with achievement scores that are above expectancy bands and then studies these schools to discover program elements that might be responsible for their success. Although effective schools research may accurately **describe** program elements within unusually effective schools, it does not reveal whether these elements would assure effectiveness in other school settings.

In a similar fashion, exemplary middle schools are identified by the existence of programs designed especially for middle level children. Important data describing these exemplary middle schools have been collected and analyzed by several researchers. These research studies do not compare or contrast the operation of these programs in various types of grade level organizations. Hence, effective programs are identified, but little is known about whether they operate more effectively in K-8 configurations, junior highs, or the newer middle schools.

This pilot study is designed to overlie this limitation, allowing policy makers to study specific characteristics associated with various middle grade organizational arrangements and to evaluate the relevance of school structure to program implementation.

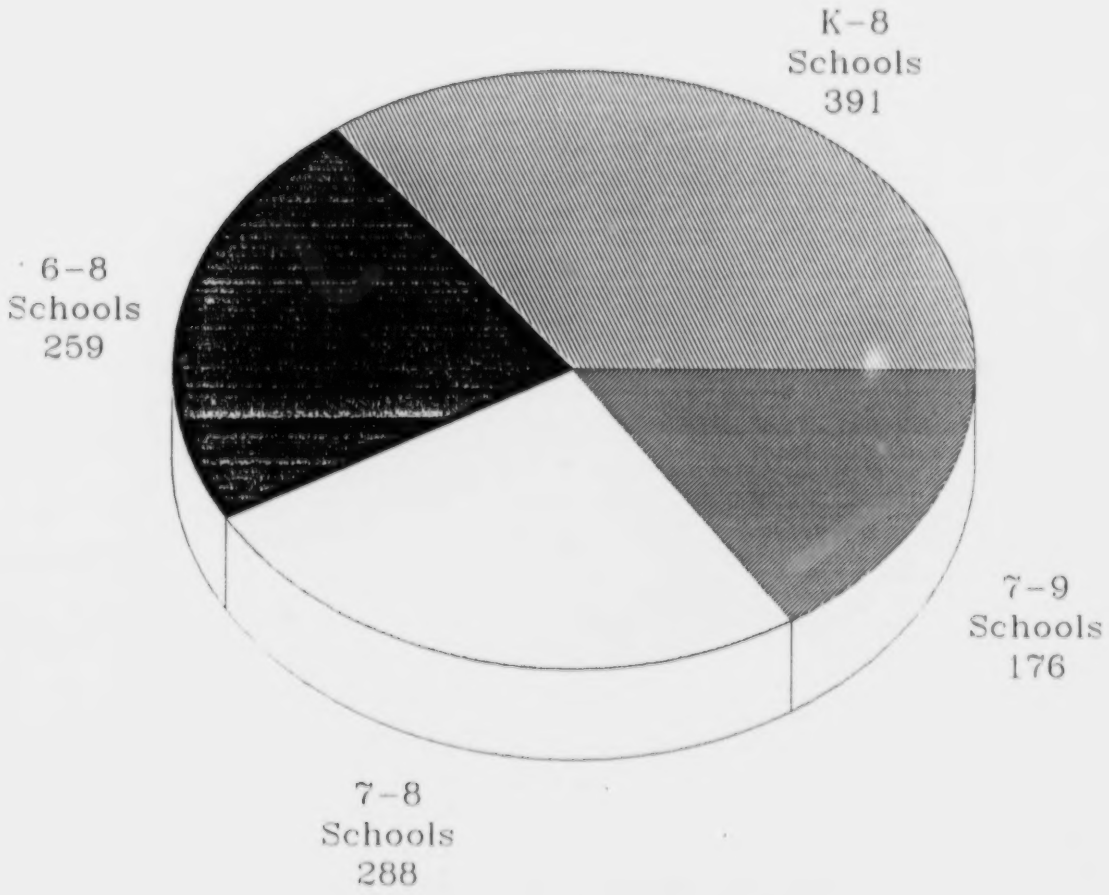
Methodology

1987-88 California Basic Educational Data (CBEDS) School Information Files (SIF) were used to identify all California schools with the following grade spans: K-8, 6-8, 7-8, 7-9. The pie chart on the following page depicts these organizational patterns.

From these four groups a stratified random sample was taken--10 schools from each grade span for a total of 40. Because of the random nature of the sample, schools from all sections of the state were included, and the diverse nature of populations, socio-economic status (SES), limited English speaking/non-English speaking (LES/NES), Aid to Families with Dependent Children (AFDC) as well as other discriminating factors are inherent in the sample. Schools from rural, urban, inner-city, and suburban areas are all part of the sample. Los Angeles schools account for 11% of the sample; San Diego schools account for 5%; the San Francisco Bay area accounts for 8%; Inland Empire schools account for 19%; and the remaining 57% represent schools from the rest of the state.

To control for "anomalies," schools labeled special education, juvenile hall/community, continuation, alternative, home instruction, independent study, exceptional, et cetera were excluded. Also, the minimum school size was limited to 400 students.

Middle Level Schools in California



N = 1,114
1987–88 CBEDS Data

Survey

A survey was developed (Appendix A) in which identified variables relating to middle level school programs were adapted from the literature review, *Vertical Articulation for the Middle Grades*. Each school in the sample was contacted by telephone and asked to respond to the survey questions. Nine of the K-8 schools answered the survey questions; all ten of the 6-8 schools and all ten of the 7-8 schools answered survey questions; only eight of the 7-9 schools agreed to answer questions concerning their programs:

RESPONSE RATE
Initial Random Stratified Sample of 40 Schools
K-8 (9 of 10) = 90 %
6-8 (10 of 10) = 100 %
7-8 (10 of 10) = 100 %
7-9 (8 of 10) = 80 %
Total (N of 37) = 92.5 %

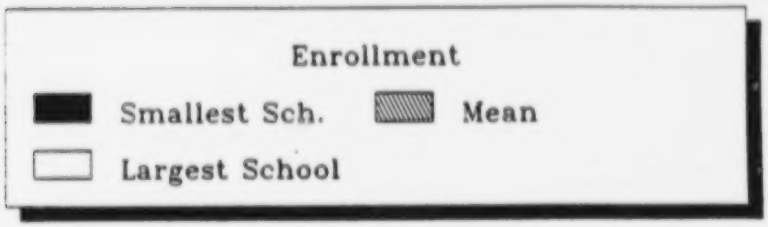
No effort was made to control for who the respondents in these schools were. In most instances the school principal or assistant principal answered survey questions; however, other respondents included counselors, a year-round track administrator, a secretary, and an office manager.

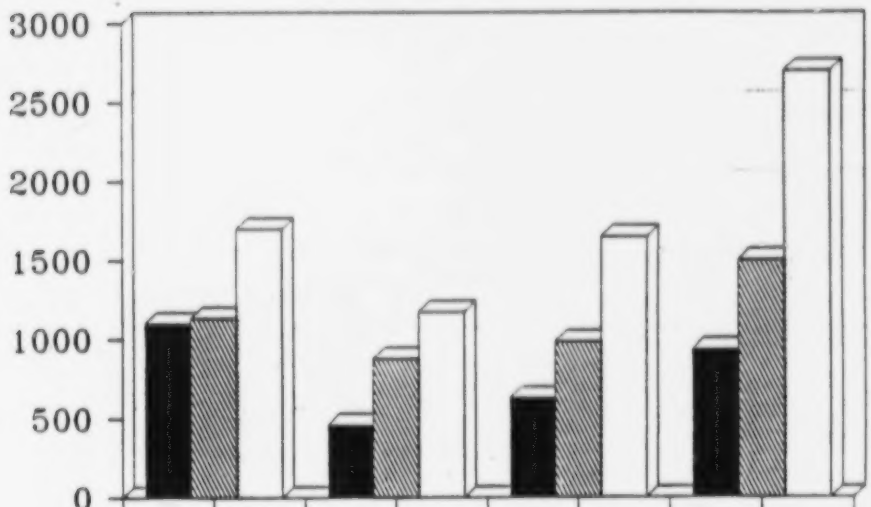
	Respondents N = 37			
	K-8	6-8	7-8	7-9
Principals	3	1	-	2
Assistant Principals	6	8	2	3
Counselors	-	1	6	2
Year-Round Track Admin.	-	-	1	-
Secretary	-	-	1	-
Office Manager	-	-	-	1
Totals	9	10	10	8

School Size

The bar chart on page 14 shows the smallest and largest enrollments, along with the means for each grade span in the sample. The 6-8 grade span schools contain the smallest school enrollment (460), the smallest "large school" enrollment (1170), and the smallest mean (878). The 7-9 schools house the largest "small" enrollment (935), the largest "large" school (2,700), and the largest mean (1501).

Middle Level School Enrollment in California





	K-8	6-8	7-8	7-9
Smallest Sch.	1100	460	630	935
Mean	1133	878	984	1501
Largest School	1700	1170	1650	2700

Grade Spans

If one were to divide the mean enrollments for each grade span by the number of grades housed, the average student population for each grade level can be determined.

Average Student Population--per Grade Level			
K-8	6-8	7-8	7-9
142	293	492	500

Although 6-8, 7-8, and 7-9 schools provided reliable data for the above calculations, K-8's were problematic. First, many schools labeled "K-8" actually were found to house a number of odd configurations, e.g., one school contained grades K,1,5,6,7,8; three schools housed grades 5,6,7,8; one contained grades 3,4,5,6,7,8; and one contained grades 2,3,4,5,6,7,8. Only three "real" K-8's surfaced, and a subsequent analysis of CBEDS SIF data revealed a disproportionately large number of small schools of fewer than 100 students in some sort of K through 8th grade configuration or combination of configurations.

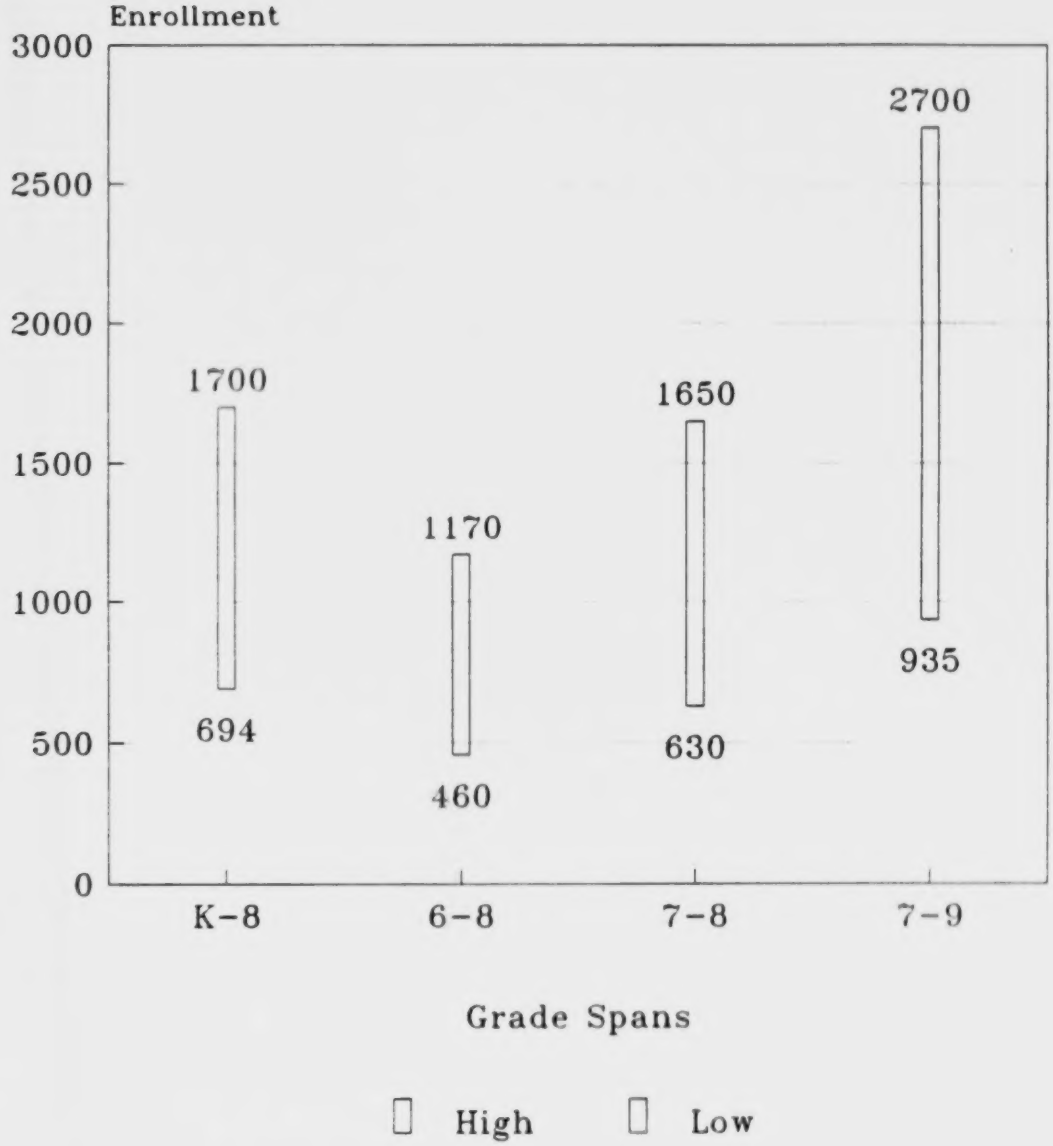
Finally, the survey data were analyzed by applying the Student-Newman-Keuls (SNK) method to discriminate among the four grade-spans relative to the six domains addressed in the survey. Thus, "types" of school organizations were compared using a matrix with grade spans on the X axis and group means on the Y axis.

The "high-low" chart on page 17 demonstrates the stair-step effect of school enrollments, with 6-8's having the narrowest and shortest band and 7-9's having the broadest and longest. In terms of size and range, 6-8 schools appear to be more "alike" than any other pair of school configuration; 7-9's are the most internally diverse schools in terms of size and range.

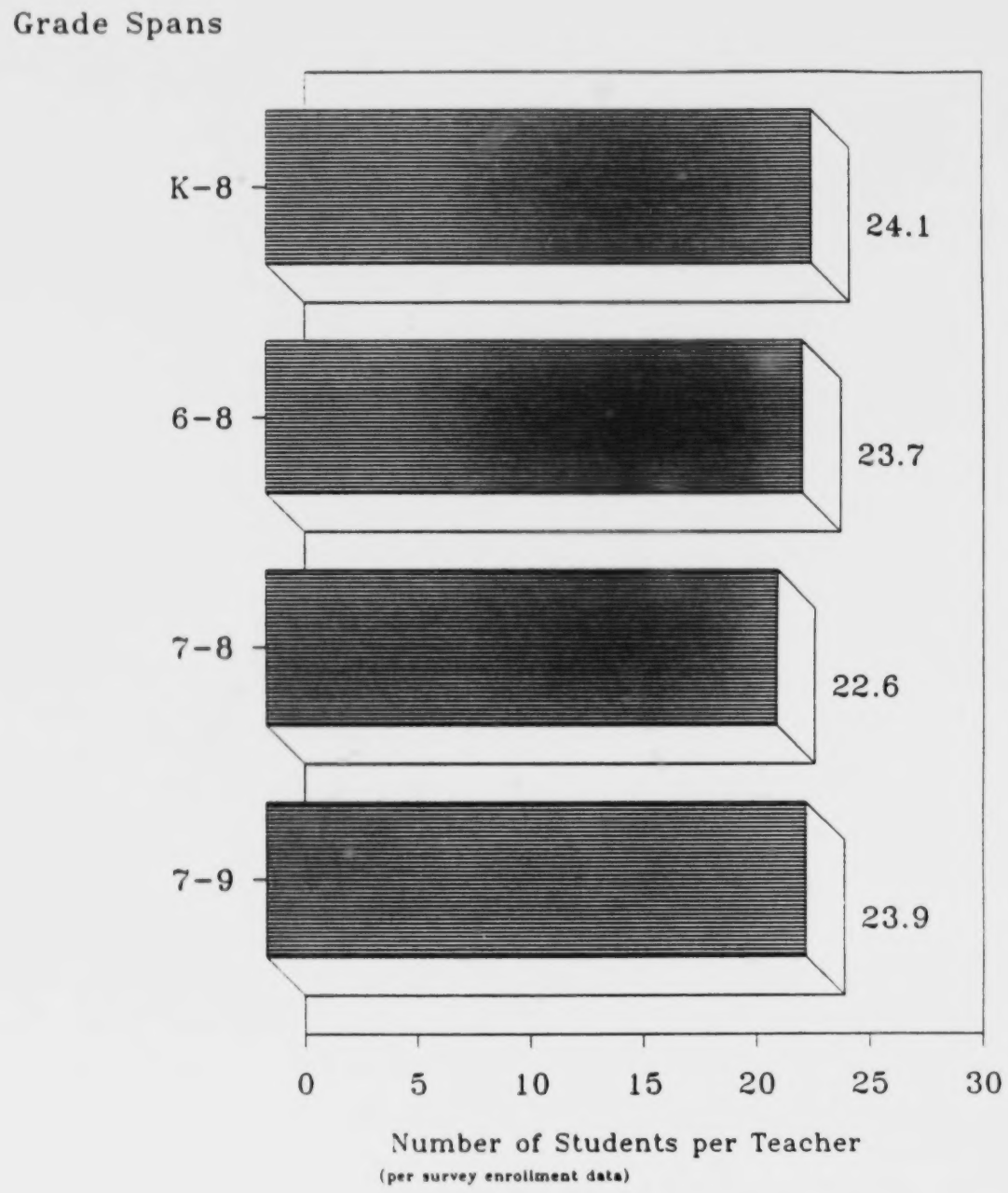
A rough estimate of pupil-to-teacher ratio was calculated by dividing reported enrollment figures by the total number of teachers at the school site. Of course, this approach is not a class size estimate and does not account for disproportionately large and small class arrangements nor specialized subject areas. The graph on page 18 merely demonstrates in "rough and ready" terms the approximate number of pupils per teacher on the average in each school organizational structure studied. Such data may be useful if programs linking students to teachers on a one-to-one basis are considered for implementation. 22.6 pupils per teacher at the 7-8 schools to 24.1 pupils per teacher at the K-8 schools suggests that such programs **are** feasible without overtaxing the teaching staff. In addition, it is somewhat surprising that the K-8 schools have the largest pupil-to-teacher ratio, given the number of elementary grades housed.

It is noteworthy to mention that analysis of state data tapes allowed us to identify 44 K-7 schools, in addition to the four spans presented, here. These 44 schools (omitted in this study) may provide additional insights into middle level program and policy practices.

Middle Level School Enrollment Ranges



Pupil-to-Teacher Ratio
California Middle Level Schools (N = 37)



SIX DOMAINS STUDIED

The pie chart on the next page depicts six program components or domains developed from an examination of those areas directly impacting middle level education. These domains impact all levels of education and are studied here in order to determine what practices are taking place and in which schools they are taking place most often. Close scrutiny of significant programs and policies identified in the literature review have been grouped into these six domains.

Personnel--Do school organizations of a particular type employ more "specialized" personnel than others? What does a "typical" K-8, 6-8, 7-8, 7-9 school look like in regard to certificated staff?

Curricular Practices--Which schools are employing more of the practices commonly agreed to be effective for middle level education?

Curriculum Offerings--What types of subjects are offered in the various grade span configurations? Do some schools typically offer more/fewer courses than others?

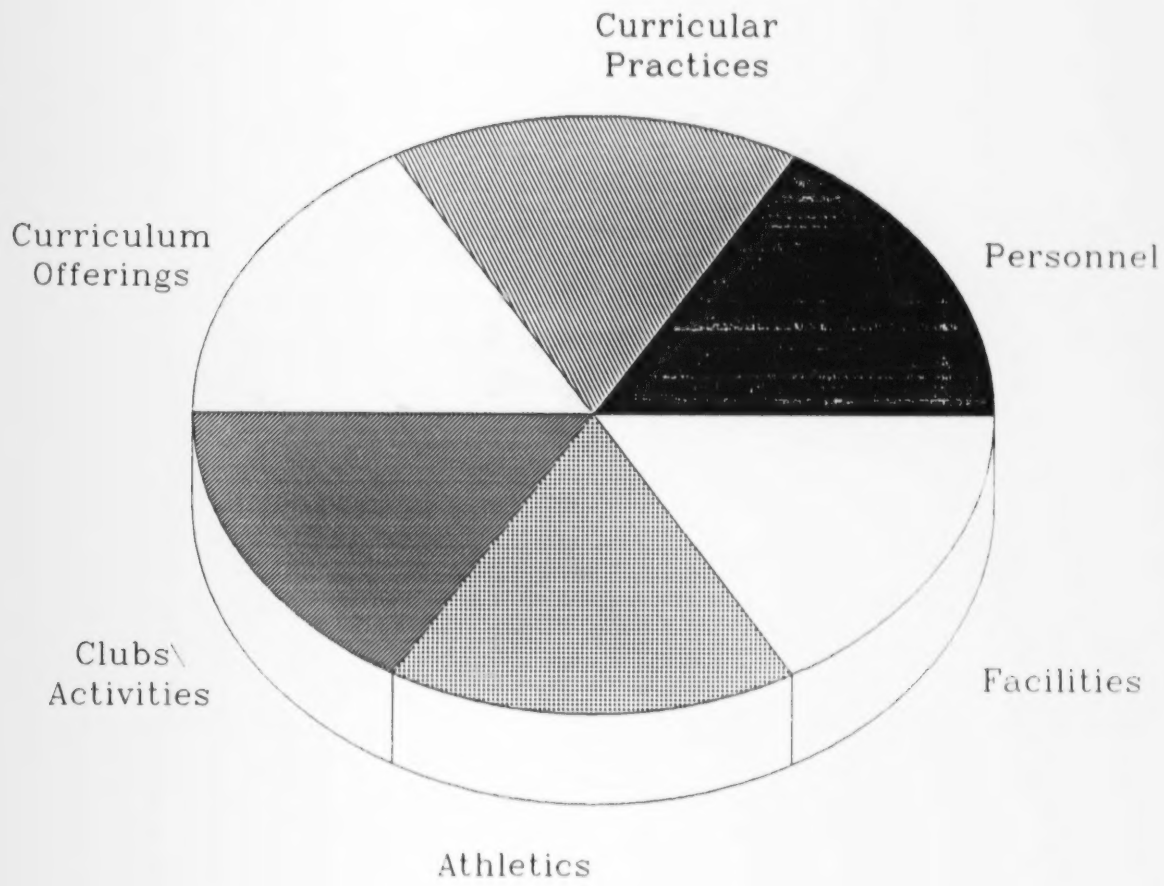
Clubs & Activities--What types are offered? Do some schools typically offer more/fewer than others?

Athletics--Do some school organizations offer more varied athletic programs than others? How do these programs differ?

Facilities--What types of facilities are most common among the grade spans studied? Have schools adapted facilities to meet program needs?

Middle Level Schools

Program Components



Six Domains Studied

Specialized Personnel

Studying the bar chart on the following page, one can readily see that all four school organizations employ more coaches and physical education teachers than any other specialized staff. Art and music teachers represent the fewest for all grade spans. Surprisingly, K-8's employ more coaches than any other group; however, these figures may represent the "everybody is a coach after school" philosophy rather than a pure designation of an individual specializing in a specific area. On the other hand, the data may be correct; K-8's may simply employ more personnel who are coaches.

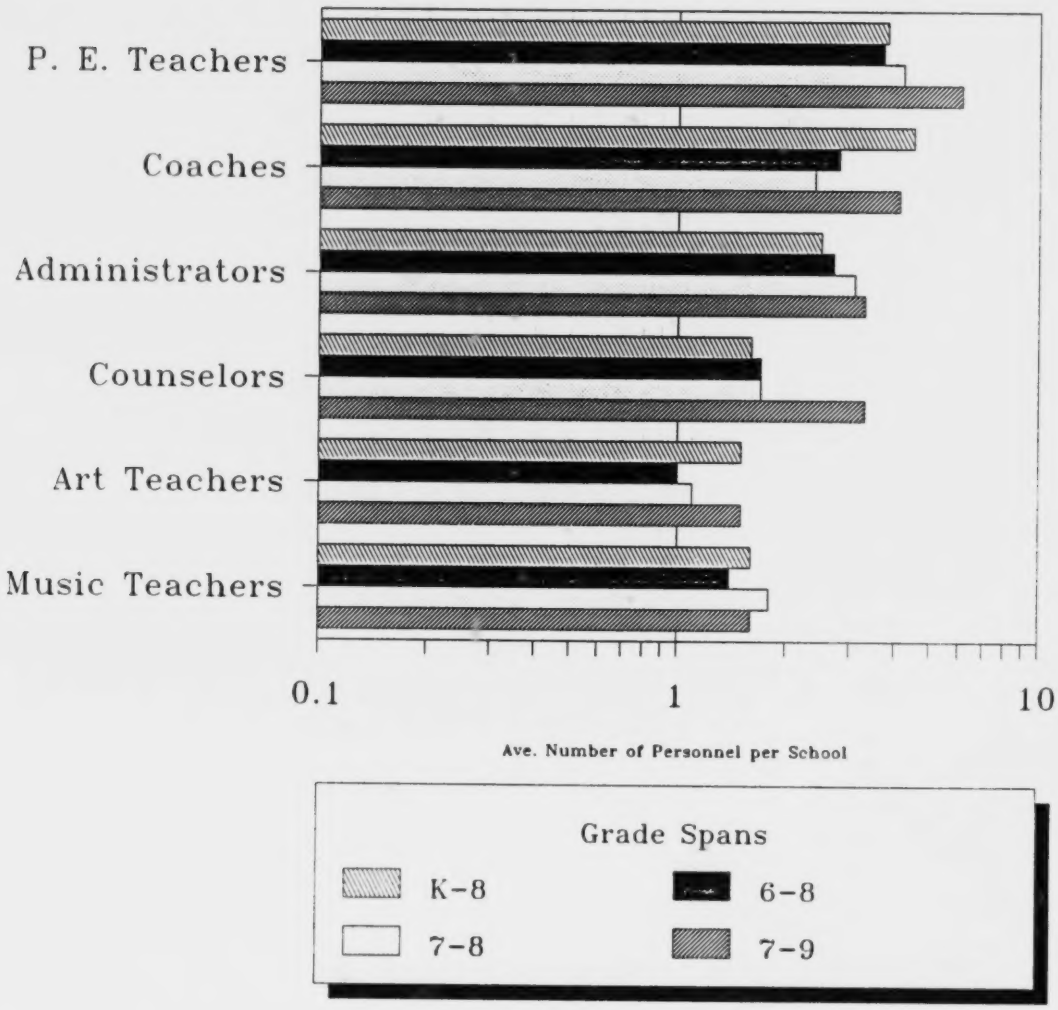
The 7-9 grade span schools, on the average overall, have more special field personnel than any other grade span; 6-8's have the fewest. Following are the data from which the bar chart was drawn:

Personnel

Category	Mean			
Coaches	4.5	2.8	2.4	4.1
Art Teachers	1.5	1.0	1.1	1.5
P.E. Teachers	3.8	3.7	4.2	6.1
Music Teachers	1.6	1.4	1.8	1.6
Counselors	1.6	1.7	1.7	3.3
Administrators	2.5	2.7	3.1	3.3
Grade Spans	K-8	6-8	7-8	7-9

Number of Specialized Personnel

Four Grade Spans Compared



Curricular Practices

The charts on page 24 display several interesting facets of curricular design in the different school patterns. First, none of the schools could definitively describe methods to monitor continuous progress of students--other than using standardized achievement test scores and the California Assessment Program (CAP). A few respondents noted that individual classroom teachers monitor student progress; however, no uniform school policy was identified. The raw data tend to suggest a lack of sophistication in evaluating the effectiveness of curricular practices.

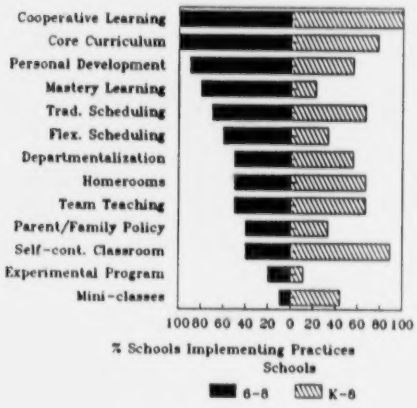
All but one of the schools reported using some degree of cooperative learning. Personal development, core curriculum, traditional scheduling, and departmentalization were similarly often used among all groups. As expected, the K-8 schools use self-contained classrooms more than any other group.

Team teaching, homerooms, flexible scheduling, mastery learning, mini-classes, experimental programs and parent/family involvement policies are incorporated less frequently than other curricular practices.

Drawing attention to the length of bands reveals comparisons among and between school organizations. 7-9's reported no self-contained classrooms; 6-8's and 7-8's are at 40% and 30%, respectively; and 90% of the K-8's reported using self-contained classrooms but also reported using departmentalized classrooms (40%). 6-8 schools appear to stress

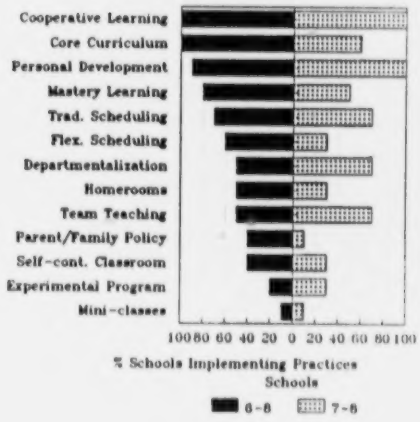
Curricular Practices

6-8 Versus K-8 Schools



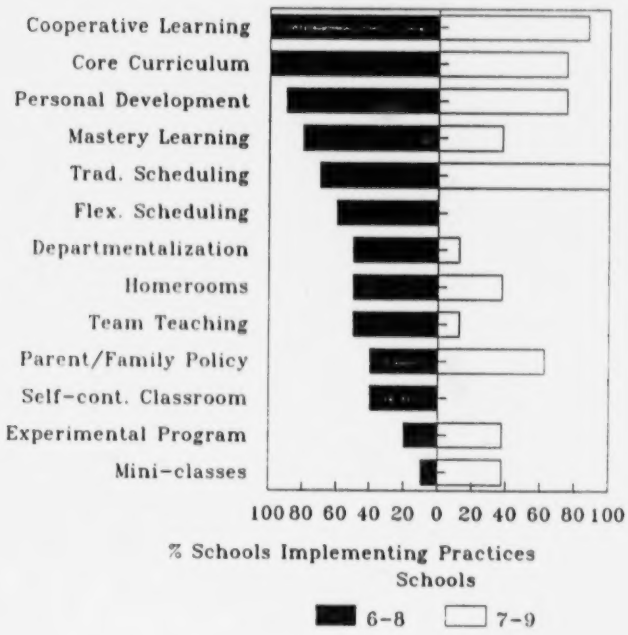
Curricular Practices

6-8 Versus 7-8 Schools



Curricular Practices

6-8 Versus 7-9 Schools



departmentalized classrooms, team teaching, traditional and flexible scheduling, core curriculum, cooperative learning, mastery learning, and programs for personal development. In contrast, for example, 7-9's appear to stress departmentalization, traditional scheduling, core curriculum, cooperative learning, and programs for personal development. Hence, 6-8's and 7-9's appear alike in several ways but differ in the use of flexible schedules and mastery learning practices. K-8 schools differ noticeably from 7-8's by incorporating more programs associated with homerooms, mini-classes, and experimental programs; whereas the 7-8's incorporate more mastery learning and experimental programs.

K-8 and 6-8 school organizations make greater use of team teaching and flexible scheduling than their 7-9 counterparts, and 7-8's are sometimes "like" K-8's and 6-8's, sometimes "like" 7-9's, but overall implement fewer middle level curricular practices identified in this study than any other grade span group.

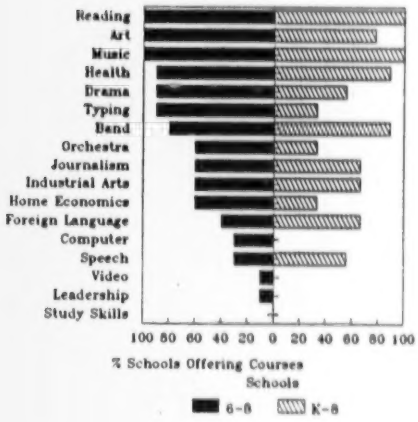
Curriculum

100 percent of the schools reported offering classes in English, social studies, science, mathematics, and physical education. For other courses, the charts on page 27 compare the 6-8 schools' curricular offerings with K-8's, 7-8's, and 7-9's. Courses in reading, art, health, music, industrial arts, drama, typing, foreign language, band, and journalism are widely offered and vary only slightly among the different school types. Speech, video, computers, leadership, and study skills courses are not widely offered. The 7-9 schools offer the greatest variety and number of courses, and are especially strong in computer and leadership classes compared to the rest of the group. In addition, the 7-9's solely report a study skills class.

The course offerings generally expand as the grade levels increase numerically. This tendency is confirmed in the list of additional electives shown on page 28. The 7-8 schools have the largest number of unique electives, followed by the 7-9's.

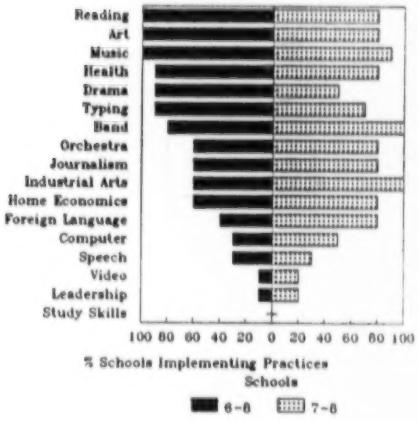
Curriculum

6-8 Versus K-8 Schools



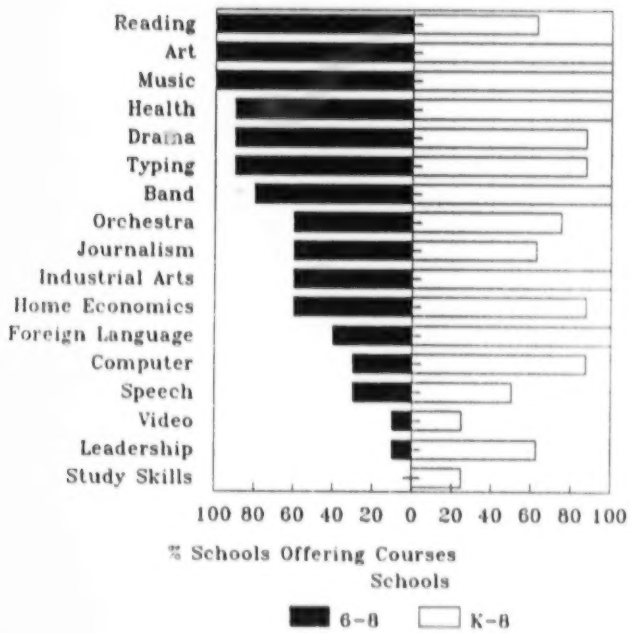
Curriculum

6-8 Versus 7-8 Schools



Curriculum

6-8 Versus 7-9 Schools



Additional Electives

K-8 Electives

Family Life & Sex Education
Drafting
Cross-age Tutoring

6-8 Electives

Woodworking
Office Monitor
Practical Art

7-8 Electives

Communications
Rockets
Drafting
Home Maintenance
Oceanography
People(poster-people)
Cross-age tutoring
Ceramics
Teen Skills
Student Aid
Music Theater
Sign Language
Photography
Peer Tutoring
Robotics
Novel Reading

7-9 Electives

Peer Counsel
Drafting
Music Appreciation
English as a Second Language (ESL)
Service Class
ROTC
Woodshop

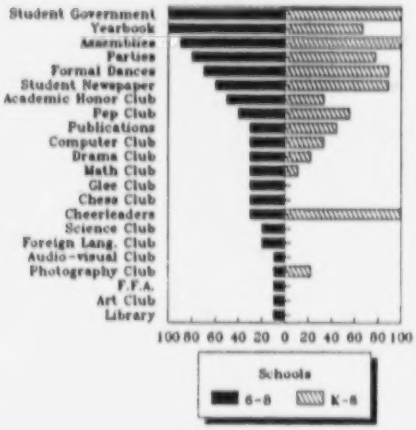
Clubs and Activities

The greatest variation across school organization types -- the number of sponsored clubs and activities -- are displayed on page 30 and tabulated on page 31. Some activities are found in virtually all schools.

Student government, yearbook, student newspaper, formal dances, parties, and assemblies, for example, are common across all grade organizations. Some, like the academic honor club are most popular among the 7-9 schools, but less popular in schools serving younger children. This pattern is typical of publications, computer, drama, and math club. Library club, foreign language club, glee club, art club, F.F.A., photography club, and audio-visual club are anomalies -- unique to a few schools, and seldom found in a K-8 school.

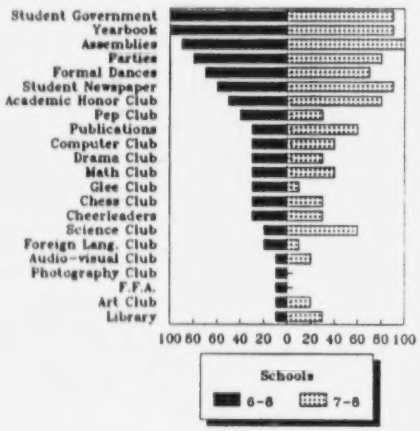
Middle Level Clubs/Activities

6-8 Versus K-8 Schools



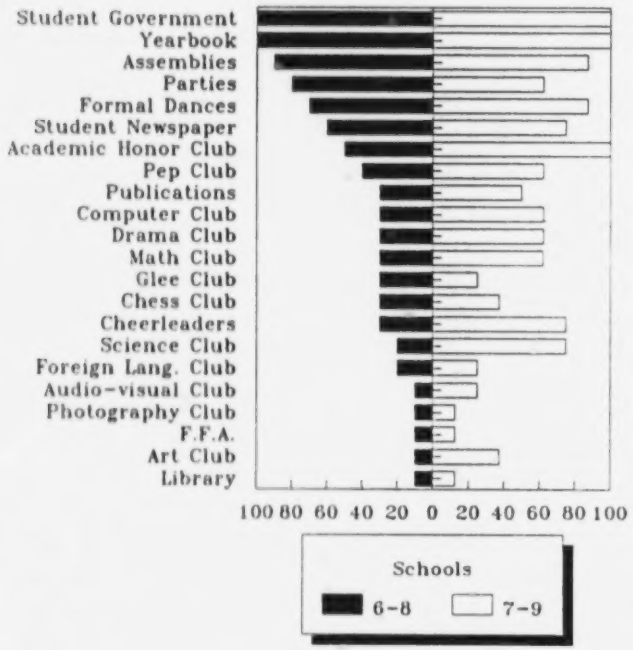
Middle Level Clubs/Activities

6-8 Versus 7-8 Schools



Middle Level Clubs/Activities

6-8 Versus 7-9 Schools



Popularity of Clubs & Activities

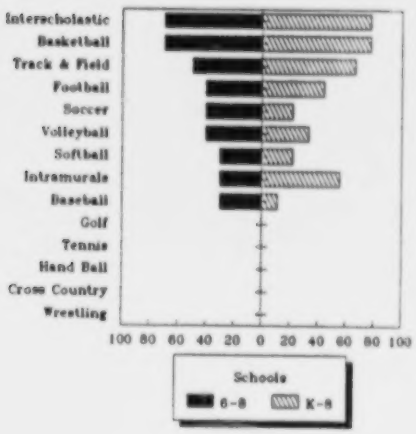
Extremely Popular	Moderately Popular	Unique
Student Government	Academic Honor Club	Library Club
Yearbook	Cheerleading	For.Lang.Club
Student Newspaper	Pep Club	Drama, Math, Glee,
Formal Dances	Science Club	Chess, Art, F.F.A.,
Parties	Publications Club	Photography, and
Assemblies	Computer Club	Aud.-Vis. Club

Athletic Programs

The bar charts on the next page show the most commonly offered athletic programs among the middle level schools. Core athletic programs are found in all schools. Older students generally have access to a wider array of sports. Intramural programs are most popular in the 7-8 schools, somewhat in the K-8 and 7-9 schools, but seldom in 6-8 schools. Interscholastic sports, however, are found frequently among all grade span schools. All schools with interscholastic athletic programs included basketball. The 7-8 schools had the fewest interscholastic programs, followed by 6-8's and K-8's; the 7-9's had the most.

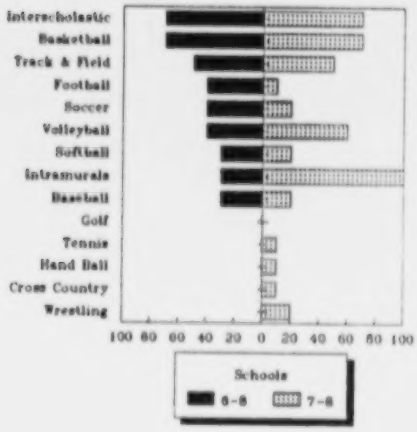
Athletic Programs

6-8 Versus K-8 Schools



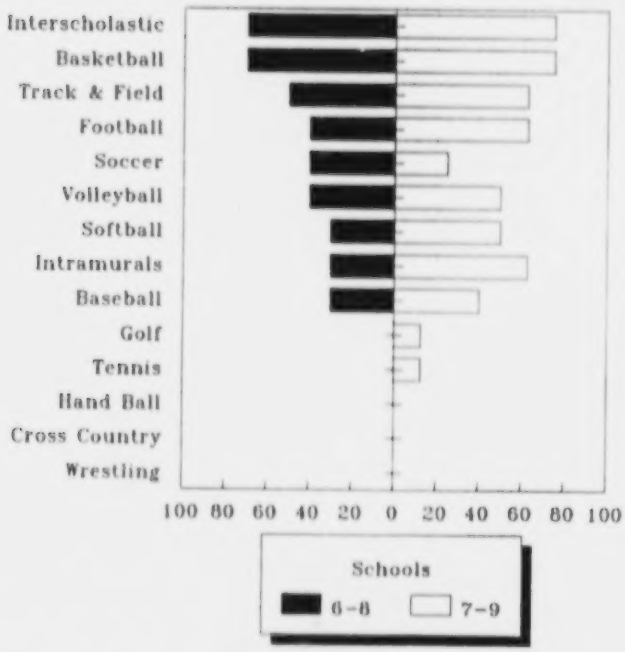
Athletic Programs

6-8 Versus 7-8 Schools



Athletic Programs

6-8 Versus 7-9 Schools



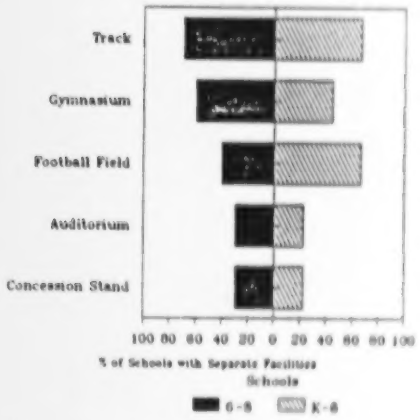
Facilities

The multiple charts presented on page 34 depict the percent of respondents who answered "yes" when asked if the school had each of the five specific facilities listed. Generally, each school type is about equally likely to have the special facilities listed. There is one noticeable exception, however; 7-9's are more likely to have auditoriums.

Many schools reported having multi-purpose rooms, i.e., combination cafeteria/gymnasium/auditorium (at least a stage) either in lieu of separate facilities or in addition to them, but this item was not included in the survey. Many schools reported having tennis courts, volleyball areas, hand ball facilities, baseball diamonds, swimming pools, work-out centers, and weight rooms in addition to the five general purpose facilities shown in the graphs.

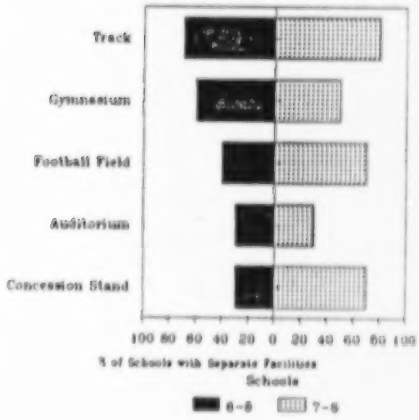
Facilities

6-8 Versus K-8 Schools



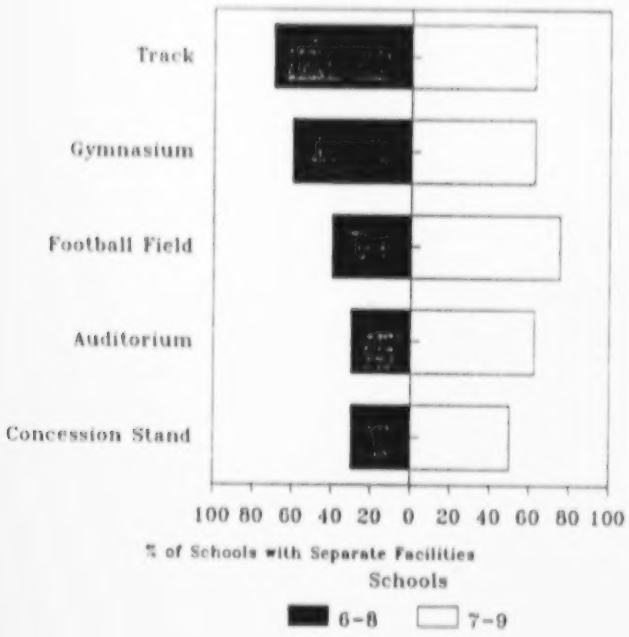
Facilities

6-8 Versus 7-8 Schools



Facilities

6-8 Versus 7-9 Schools



Findings

A few survey items not broached in the report might be classified as "unstructured, qualitative information items." These questions addressed program **perceptions** and included:

> Is your school program designed primarily to meet the needs of (1) elementary, (2) middle level, or (3) high school children?
>
> Do you know what a transescent is?
>
> Are you familiar with the report *Caught in the Middle*?
>
> Are you implementing *Caught in the Middle* practices?

One hundred percent of the K-8 schools responded that their programs were designed to meet middle level needs; 55% added that they also address elementary needs. 100% of the 6-8's and 7-8's believed their programs to be aimed at middle level children; while 62.5% of the 7-9's responded "middle level," the other 37.5% said their programs were designed to meet the needs of high school level children.

22% of the K-8 respondents knew what a transescent is; 30% of the 6-8 respondents knew; 40% of the 7-8 respondents knew; and 12.5% (1) of the 7-9 respondents knew.

Eighty-eight percent of the K-8 respondents were familiar with and their schools were implementing *Caught in the Middle* programs. Of the respondents answering for the 6-8 schools, 90% were familiar with the report and were implementing the programs. 100% of the 7-8 respondents answered favorably to both questions. 62.5% of the 7-9 respondents were acquainted with and implementing *Caught in the Middle* practices.

The responses outlined above may indicate that a stronger perception of "unique" middle level schools can be found in 6-8 and 7-8 schools than in either K-8 or 7-9's. Only 7-9 schools appear to be different but not significantly. These perceptions, attitudes, philosophies would make interesting subjects for the design of other studies.

A few survey questions proved ambivalent. When asked if homerooms were used primarily for administrative purposes or for guidance and counseling, the respondents reported various degrees to which each may be accomplished. This area needs further design, as homerooms have proven to be effective ways to cope with middle level needs; however, our survey did not yield adequate evidence that either administration or guidance and counseling took place.

Inferential Statistical Analysis

Analysis of variance[1] was used to find if a significant difference exists among the four grade organizations. The following table identifies the two domains where the different school types displayed significantly different programs and services.

---

[1]The Student-Newman-Keuls method, a multiple-comparison procedure used to discriminate among four groups, was used. Whenever an Analysis of Variance (ANOVA) F test for simultaneously comparing several population means is found to be statistically significant, it is then customarily of interest to determine which specific differences there are among the population means. Several statistical procedures can be used, such as Tukey's method. However, SNK is an alternative to Tukey's method. SNK uses the studentized range distribution but with a modified numerator degrees of freedom.

CONTENT OF SIX DOMAINS

Domain	Sig. Difference	Schools
Personnel	**	J.H. vs M.S.
Clubs/Activities	**	J.H. vs M.S. J.H. vs Ele.
Curricular Practices	no significant differences	
Curriculum Offerings	no significant differences	
Athletic Programs	no significant differences	
Facilities	no significant differences	

** Significant differences found between the groups listed.

The 7-9 junior high schools[2] differ significantly from middle schools in the area of specialized personnel. Junior highs also differ from middle schools and elementary schools in the number of different school sponsored clubs and student activities.

In combination with the more qualitative data presented earlier, the statistical analysis indicates that middle school strengths are found primarily in the curricular practices they implement. The 7-8 middle highs have the most facilities. Other program and service elements are spread more or less equally among all school types. The 7-9 junior highs are strong in all areas

[2]For the purposes of this analysis, junior high school will be used to identify the 7-9 grade span schools; middle school will be used for the 6-8 grade spans; middle high will denote the 7-8 grade spans; and elementary will be the epithet for K-8 grade span schools.

except the middle level curricular practices which is their least emphasized domain. The K-8 elementary schools give almost equal attention to curricular practices, specialized personnel, and facilities, but the remaining three domains are stressed less.

One must be careful, however, not to infer that an equal distribution is preferable or that unequal amounts are less beneficial. Rather, policy makers must decide which program elements are most important to middle level children and consider which organizational pattern(s) might best facilitate the implementation of the desired programs.

In general terms this study reveals a commitment among middle schools to implementation of middle level curricular practices. Elementary and middle schools differ from junior highs, but the 7-8 middle highs occupy a middle ground with no statistically significant differences from the elementary, middle, or junior high schools.

Still, the question as to which is the "best" organizational structure cannot be answered. Local community preference is certainly one appropriate consideration, since none of the research evidence collected to date provides compelling scientific evidence that any particular grade span significantly improves student learning or social adjustment.

Should adoption of a middle school grade structure provide unique opportunities for careful review and positive changes in current programs, this may be reason enough to consider grade level reorganization. Moreover, it is quite appropriate for policy makers to explore a variety of alternative programs and practice modifications, regardless of the grade-spans adopted.

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Appendix A

MIDDLE LEVEL PROGRAMS

SURVEY

School Name_____ Phone Number_____

Contact Person_____ Date Contacted_____

name title

Grades Housed at School Site_____ Total School Enrollment_____

Total Number of Classroom Teachers_____

Total Number of Coaches_____

Total Number of Art Teachers_____

Total Number of P.E. Teachers_____

Total Number of Music Teachers_____

Total Number of School Counselors_____

Total Number of Administrators_____

Number of self-contained classrooms_____

Number of departmentalized classrooms_____

Other_____

Do you use team teaching?

Do you have home rooms? Are home rooms used primarily for administrative purposes or for guidance and counseling?

Do you use traditional scheduling? Explain.

Do you use some type of flexible schedule? Explain.

Is your school program designed primarily to meet the needs of (1) elementary (2) middle level, or (3) high school children?

Approximately how many students are retained in your school in any given year?_____

Do you use a core curriculum?

Do you use cooperative learning? How extensively?

Do you use mastery learning?

How do you monitor continuous progress?

Do you have a program for personal development activities? Explain.

Do you have mini-classes or experimental programs? Explain.

Do you have a school or district policy regarding parental and/or family involvement?

Explain.

Check programs currently offered:

English
Social Studies
Science
Mathematics
Reading
Art
Physical Education
Health
Music
Home Economics
Industrial Arts
Speech
Drama
Typing
Foreign Language
Orchestra
Band
Journalism

Others:

Electives:

Intramural athletic programs

Interscholastic athletic programs
- basketball
- football
- track and field
- soccer

others:

Clubs and Activities:

Pep Club
Academic Honor Club
Science Club
Publications Club
Computer Club
Library Club
Foreign Language Club
Drama Club
Math Club
Glee Club
Chess Club
Art Club
Future Farmers of America
Photography Club
Audio-visual Club
Industrial Arts Club

Other Clubs/Activities:

Student Government
Cheerleading
Yearbook
Student Newspaper
Formal Dances
School Parties (not during school day)
Assemblies

Do you have an auditorium?

Do you have a football field? Track? Other?

Do you have a separate gymnasium?

Do you operate a concession stand?

Do you know what a transescent is?

Are you familiar with the report *Caught in the Middle*?

Are you implementing *Caught in the Middle* practices?

What school policies do you have that directly address the unique needs of students in the middle grades, i.e., 5-9? (Ask to mail copies)